

CLAIMS

1. A lactic acid-based resin composition comprising a mixture of a mixture (A) of polylactic acid (a1) and an aliphatic polyester (a2), and an aliphatic block co-polyester (B) having a polylactic acid segment and an aliphatic polyester segment, wherein the aliphatic block co-polyester (B) satisfies all the following conditions (1) to (3):

(1) it contains a lactic acid component in an amount of from 20 to 80 wt% in terms of monomer,

(2) it has a weight average molecular weight of 1,000 or more and less than 60,000, and

(3) it has a weight average molecular weight of the polylactic acid segment of from 500 to 55,000 and a weight average molecular weight of the aliphatic polyester segment of from 500 to 55,000.

2. The lactic acid-based resin composition according to claim 1, wherein a compositional ratio of the mixture (A) and the aliphatic block co-polyester (B) is from 0.05 to 10 parts by weight of the aliphatic block co-polyester (B) per 100 parts by weight of the mixture (A).

3. The lactic acid-based resin composition according to claim 1, wherein the aliphatic polyester (a2) has an elastic modulus measured by the test method of JIS K6732 of 2,500 MPa or less.

4. The lactic acid-based resin composition according to claim 1, wherein the mixture (A) of the polylactic acid (a1) and the aliphatic polyester (a2) has a mixing ratio of from 80 to 20 parts by weight of the aliphatic polyester (a2) per from 20 to 80 parts by weight of the polylactic acid (a1).

5. The lactic acid-based resin composition according to claim 1, wherein the aliphatic polyester (a2) is polybutylene succinate and/or polycaprolactone.

6. A molded article comprising a lactic acid-based resin composition according to claim 1.

7. The molded article according to claim 6, which is stretched in at least one direction by from 1.1 to 15 times.

8. The molded article according to claim 6, wherein the molded article is a film or a sheet.

9. The molded article according to claim 6, wherein the molded article is a tape yarn.

10. The molded article according to claim 6, wherein the molded article is a mono-filament or multi-filaments.

11. The molded article according to claim 6, wherein the molded article is a nonwoven fabric.

12. A process of using (B) an aliphatic block co-polyester having a polylactic acid segment and an aliphatic polyester segment, as a compatibility agent for a mixture (A) of polylactic acid (a1) and an aliphatic polyester (a2), wherein

the aliphatic block co-polyester (B) satisfies all the following conditions (1) to (3):

- (1) it contains a lactic acid component in an amount of from 20 to 80 wt% in terms of monomer,
- (2) it has a weight average molecular weight of 1,000 or more and less than 60,000, and
- (3) it has a weight average molecular weight of the polylactic acid segment of from 500 to 55,000 and a weight average molecular weight of the aliphatic polyester segment of from 500 to 55,000.